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Total Number of Pages : 02

B.Tech.
PES2C001

2nd Semester Regular / Back Examination 2017-18

ENVIRONMENTAL STUDIES & HEALTH CARE ENGINEERING

BRANCH : AEIE, AERO, AUTO, BIOMED, BIOTECH, CHEM, CIVIL, CSE, ECE, EEE, EIE,
ELECTRICAL, ENV, ETC, FAT, IEE, IT, MANUFAC, MANUTECH, MECH, METTA,
MINERAL, MINING, MME, PE, PLASTIC, PT, TEXTILE

Time : 3 Hours

Max Marks : 100

Q.CODE : C1039

Answer Part-A which is compulsory and any four from Part-B.

The figures in the right hand margin indicate marks.

Answer all parts of a question at a place.

Part – A (Answer all the questions)

Q1 Answer the following questions: *multiple type or dash fill up type:* (2 x 10)

- a) Depletion of ozone layer in the outer atmosphere is likely to increase the incidence of
- Skin cancer
 - lung cancer
 - bronchitis
 - UV radiation
- b) is the hottest layer of atmosphere.
- c) Hardness of water is caused due to presence of and in water.
- d) Pathogens are usually removed by
- e) Which of the following process is used to remove the colloidal particles from water
- Chemical precipitation
 - Chemical coagulation
 - Ion exchange
 - Adsorption
- f) In year the environmental protection act was enacted.
- g) The average air consumption by an adult human being is of order
- 5kg
 - 12kg
 - 25kg
 - none of the above
- h) Flocculation is a process of
- i) The most significant environmental phenomena threatening mankind is
- global warming
 - ozone hole
 - acid rain
 - smog formation
- j) The most significant gaseous air pollutant is.....

Q2 Answer the following questions: *Short answer type:* (2 x 10)

- What is EIA? What are the key elements of EIA?
- Write the classification of Solid Waste Management.
- What are the Environmental Protection Laws in India?
- What are the different components of Ecosystem?
- What is difference between Gross Primary Productivity (GPP) and Net Primary Productivity (NPP)?
- Write the ecological Perspective and explain the functioning of ecosystem.
- Define the occupational health.
- Write note on Aquatic pollution.
- Write prevention and control measures of malaria.
- If a sound source has a pressure of 200 mega Pascal at 10 m distance. Calculate the sound pressure level?

Part – B (Answer any four questions)

- Q3** a) What is ecological pyramid? Explain its different types with diagram. (10)
b) Explain Nitrogen Cycle with neat sketch. (5)

- Q4** a) What are the different environmental gradients and tolerance limits? (10)
b) BOD of an effluent sample incubated for 1 day at 30°C was found to be 100mg/l. what would be the 5 day BOD at 20°C? $K = 0.12$ at 20°C. (5)

- Q5** a) Differentiate between Slow Sand Filter and Rapid Sand Filter. (10)
b) Write the physical and chemical standard for drinking water purposes. (5)

- Q6** a) Draw and explain in brief the major environmental segments with their temperature profile. (10)
b) Describe the soil pollution and its remedies? (5)

- Q7** a) Explain the management and disposal of hazardous waste in steel industry. (10)
b) Explain the different properties and management of solid wastes. (5)

- Q8** a) What are the effects, causes and control measures of noise pollution? (10)
b) Define disinfection. Explain the break-point chlorination with diagram. (5)

- Q9** a) Define environmental sanitation and explain different communicable diseases with suitable example. (10)
b) What is the role of information technology in human health? (5)